

IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claims 1-10 (Canceled).

Claim 11 (Currently Amended): An apparatus for bending a glass sheet, comprising an upper mold having a bending surface facing downward in a substantially vertical direction, and a frame unit having a bending surface facing upward in the substantially vertical direction so as to be engageable with the bending surface of the upper mold, whereby a preliminarily heated and softened glass sheet is pressed by the upper mold and the frame unit so as to be bent in a desired shape, and;

means for controlling an amount of preliminary bending to control deformation of the heated and softened glass sheet caused by the preliminary bending, the glass sheet being put on the frame unit, and

sticking means for holding the heated and softened glass sheet and for dropping the glass sheet on the frame unit to put the glass sheet thereon; and

means for conveying the frame unit with the glass sheet put thereon to a position just under the upper mold;

wherein the means for controlling an amount of preliminary bending comprises a heater incorporated into the sticking means ~~with a heater incorporated thereinto~~, whereby a desired portion of the heated and softened glass sheet is heated while the glass sheet is stuck and held by the sticking means to accelerate the preliminary bending of the glass sheet ~~while the glass sheet is stuck and held by the sticking means~~ between just before putting the glass sheet on the frame unit and just before pressing the glass sheet.

Claim 12 (Canceled).

Claim 13 (Currently Amended): An apparatus for bending a glass sheet, comprising an upper mold having a bending surface facing downward in a substantially vertical direction, and a frame unit having a bending surface facing upward in the substantially vertical direction so as to be engageable with the bending surface of the upper mold, whereby a preliminarily heated and softened glass sheet is pressed by the upper mold and the frame unit so as to be bent in a desired shape, and;

means for controlling an amount of preliminary bending to control deformation of the heated and softened glass sheet caused by the preliminary bending, the glass sheet being put on the frame unit,

wherein the means for controlling an amount of preliminary bending comprises [[a]] the frame unit including a fixed frame and a movable frame pivoted on the fixed frame, whereby the movable frame is tilted about a portion of the fixed frame unit with the movable frame pivoted thereon to raise an end of the heated and softened glass sheet, accelerating the preliminary bending of the glass sheet.

Claim 14 (Currently Amended): An apparatus for bending a glass sheet, comprising an upper mold having a bending surface facing downward in a substantially vertical direction, and a frame unit having a bending surface facing upward in the substantially vertical direction so as to be engageable with the bending surface of the upper mold, whereby a preliminarily heated and softened glass sheet is pressed by the upper mold and the frame unit so as to be bent in a desired shape, and;

means for controlling an amount of preliminary bending to control deformation of the heated and softened glass sheet caused by the preliminary bending, the glass sheet being put on the frame unit,

wherein the means for controlling an amount of preliminary bending comprises the frame unit including an outer frame unit including a fixed frame and a movable frame pivoted on the fixed frame, and an inner frame/flat member provided on an inner peripheral side of the outer frame unit and having a flatter shape than the outer frame unit; whereby the heated and softened glass sheet is transferred onto the outer frame unit after having been put on the inner frame/flat member, and the movable frame is tilted about a portion of the fixed frame unit with the movable frame pivoted thereon to raise an end of the heated and softened glass sheet, accelerating the preliminary bending of the glass sheet.

Claim 15 (Previously Presented): The apparatus according to claim 11, wherein the upper mold, the frame unit and the means for controlling an amount of preliminary bending are provided in a heating furnace.

Claim 16 (Previously Presented): The apparatus according to claim 11, wherein the bending surface of the upper mold has a plurality of holes formed therein and the holes are connected to an air supply/exhaustion means.

Claim 17 (Previously Presented): The apparatus according to claim 13, wherein the upper mold, the frame unit and the means for controlling an amount of preliminary bending are provided in a heating furnace.

Claim 18 (Previously Presented): The apparatus according to claim 14, wherein the upper mold, the frame unit and the means for controlling an amount of preliminary bending are provided in a heating furnace.

Claim 19 (Previously Presented): The apparatus according to claim 13, wherein the bending surface of the upper mold has a plurality of holes formed therein and the holes are connected to an air supply/exhaustion means.

Claim 20 (Previously Presented): The apparatus according to claim 14, wherein the bending surface of the upper mold has a plurality of holes formed therein and the holes are connected to an air supply/exhaustion means.

Claim 21 (Previously Presented): A method for bending a glass sheet, wherein a preliminarily heated and softened glass sheet is pressed in a desired shape by an upper mold and a frame unit, the upper mold having a bending surface facing downward in a substantially vertical direction, and the frame unit having a bending surface facing upward in the substantially vertical direction so as to be engageable with the bending surface of the upper mold, comprising:

putting the heated and softened glass sheet on the bending surface of the frame unit to preliminarily bend the glass sheet by gravity before pressing the glass sheet by the upper mold and the frame unit, and using means for controlling an amount of preliminary bending to control deformation of the glass sheet caused by the preliminary bending; and

pressing the preliminarily bent glass sheet by the upper mold and the frame unit, wherein the using of means for controlling an amount of preliminary bending comprises using a sticking means with a heater incorporated thereinto, whereby a desired portion of the

heated and softened glass sheet is heated to accelerate the preliminary bending of the glass sheet while the glass sheet is stuck and held by the sticking means.

Claim 22 (Previously Presented): A method for bending a glass sheet, wherein a preliminarily heated and softened glass sheet is pressed in a desired shape by an upper mold and a frame unit, the upper mold having a bending surface facing downward in a substantially vertical direction, and the frame unit having a bending surface facing upward in the substantially vertical direction so as to be engageable with the bending surface of the upper mold, comprising:

putting the heated and softened glass sheet on the bending surface of the frame unit to preliminarily bend the glass sheet by gravity before pressing the glass sheet by the upper mold and the frame unit, and using means for controlling an amount of preliminary bending to control deformation of the glass sheet caused by the preliminary bending; and

pressing the preliminarily bent glass sheet by the upper mold and the frame unit, wherein the using of means for controlling an amount of preliminary bending comprises using a frame unit including a fixed frame and a movable frame pivoted on the fixed frame, whereby the movable frame is tilted about a portion of the fixed frame unit with the movable frame pivoted thereon to raise an end of the heated and softened glass sheet, accelerating the preliminary bending of the glass sheet.

Claim 23 (Previously Presented): A method for bending a glass sheet, wherein a preliminarily heated and softened glass sheet is pressed in a desired shape by an upper mold and a frame unit, the upper mold having a bending surface facing downward in a substantially vertical direction, and the frame unit having a bending surface facing upward in the

substantially vertical direction so as to be engageable with the bending surface of the upper mold, comprising:

putting the heated and softened glass sheet on the bending surface of the frame unit to preliminarily bend the glass sheet by gravity before pressing the glass sheet by the upper mold and the frame unit, and using means for controlling an amount of preliminary bending to control deformation of the glass sheet caused by the preliminary bending; and

pressing the preliminarily bent glass sheet by the upper mold and the frame unit,

wherein the using of means for controlling an amount of preliminary bending comprises using an outer frame unit including a fixed frame and a movable frame pivoted on the fixed frame, and using an inner frame/flat member provided on an inner peripheral side of the outer frame unit and having a flatter shape than the outer frame unit;

whereby the heated and softened glass sheet is transferred onto the outer frame unit after having been put on the inner frame/flat member, and the movable frame is tilted about a portion of the fixed frame unit with the movable frame pivoted thereon to raise an end of the heated and softened glass sheet, accelerating the preliminary bending of the glass sheet.